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ART. CCXLV. — *On the British Species of Sphagnum.* By W. WILSON, Esq.

THE investigation of this difficult genus is more properly a task for one who has uninterrupted leisure : but since the subject has recently come under my special notice, I am induced to present the result of my enquiries to your readers, reserving the details for the 'Manual of British Bryology,' which it is my intention ere long to publish.

Mr. Valentine has long ago pointed out, in the 'Muscologia Nottinghamiensis,' a good diagnostic for S. cymbifolium, *Dill.* (S. obtusifolium, *Hook. & Tayl.*), residing in the cellules which constitute the cortical layer of the ramulus. If these are carefully examined with a good lens, they will be found to have a very curious lining of spiral fibres coating the whole interior surface, except where the circular pores are found. This lining, and the circular pores, are analogous to those of the cellules which compose the leaves.

S. compactum (Bridel), found in Oxton-bog by Mr. Valentine, has the cellules of the ramulus quite destitute of spiral lining. The leaves are different in shape from those of S. cymbifolium, *ovate-oblong, the upper portion almost subulate, and the apex always præmorso-dentate.* The leaves of S. cymbifolium vary in shape from roundish to elliptical, generally boat-shaped, sometimes recurved in the upper half, when they greatly resemble those of S. squarrosum, but may always be known by their very concave and entire apices, and by the prominent cells at the back of the leaf, just below the apex. S. compactum and S. cymbifolium are the only species known to me which have the margin of the leaf minutely denticulate (especially towards the apex): all the other species have the margin entire and cartilaginous, most evidently so in S. cuspidatum, *Ehrh.*

S. squarrosum (Pers.), has the leaves recurved and very acute at the apex : it can only be confounded with the squarrose variety of S. cymbifolium.

S. contortum (Schultz) is a difficult species, as I judge from the circumstance of its having been described in the 'Bryologia Germanica,' "foliis ovato-acuminatis *falcato-subsecundis* nitidis, ramulis recurvato-contortis." The name itself seems to be unhappy ; since it is applicable only to one, and that not a general form of the species. Indeed it is only by means of specimens apparently authentic in Mougeot and Nestler's 'Stirpes Crypt. Voges. Rhen. No. 807,' that I am enabled to identify this moss. If I am right in my conclusions, the more general state of this species is one which does not present any appearance of contorted and recurved ramuli, nor any unilateral or falcate direction of the leaves. It often assumes a large size, with very large leaves, when growing in water, and in this state has been called S. laxifolium by Mr. Valentine (though he ultimately regarded it as only a variety of S. acutifolium), and has not long ago been reported as a new species gathered in Devonshire by the Rev. C. A. Johns. S. contortum is readily known from S. cymbifolium and S. compactum, by the ovate-acute leaves, which are nevertheless præmorse at the apex. An excellent additional character is found in the *cellules of the main stem being disposed in only one layer*, in which respect it differs from all known species, except S. subsecundum. Found in Cheshire and Nottinghamshire.

S. subsecundum (Nees ab Esenb.), has not yet been found in Britain, but I think it right to mention it here, and the more so, because in the collection of Mougeot and Nestler, it has been confounded with S. contortum. The leaves of S. subsecundum are somewhat unilateral, ovate, acute, *not præmorse at the apex*, *very concave*, but otherwise not readily distinguishable from S. contortum, with which they agree in their very small cellules. It may be that S. subsecundum is only a variety of S. contortum, and if I mistake not, S acutifolium is equally variable in reference to the apex of the leaf, or otherwise two species are confounded under that name.

S. molluscum (Bridel), is a beautiful little soft species, found about Warrington and in Wales, many years ago, by myself; more recently by Mr. Spruce in Yorkshire, and by Mr. Sidebotham in Oxton-bog. This has small, ovate, concave, acute leaves, scarcely præmorse at the apex, and the cellules large, if compared with S. subsecundum and S. contortum. It is beautifully characterised by the peculiar shape of the cellules of the ramuli; each of these cells (unlike the cylindrical ones of the other species) is curved at top so as to stand out from the ramulus, and the circular orifice at the extremity is thus rendered very conspicuous.

S. acutifolium (Ehrh.), is known by the ovate-lanceolate acute leaves, which, when dry, have the margins unchanged. The leaves in one variety are very regularly packed in five rows. It is very common.

S. cuspidatum (Ehrh.) has the cartilaginous margins of the leaves reflexed and wavy when dry; the shape of the leaf is narrower than in S. acutifolium; often very long and tapering in the aquatic state named S. plumosum. A less common species than the last.

Besides these characters, by which the species may be known, there are others consisting in the different form of the perichætial leaves, whereby S. squarrosum, cymbifolium and acutifolium are very obviously separated from each other: the others I have but partially examined. Differential characters are found also in the texture of the walls of the capsule.

It is hoped that these hints may serve as a satisfactory reply to Mr. Sidebotham's request for information upon the subject, (Phytol. 871). I shall feel obliged by the communication of specimens of any Sphagnum which cannot be recognized as belonging to the species here enumerated as British. It is highly probable that additional species will be discovered, especially S. tenellum, *Pers.*, now that the subject is rendered accessible to the readers of 'The Phytologist.'

W. WILSON.

Warrington, September 27, 1844.

ART. CCXLVI. — *Notice of Presl's 'Hymenophyllaceæ.'*

(Concluded from p. 1106).

Genus, SPHÆROCIONIUM, *Presl.*

"Costa teres, prominula. Venæ pinnatæ, alternæ, distantes, simplices ramosæque, steriles venulisque conformibus apice liberodesinentes. Sorus in lacinia frondis terminalis, compresso-planus, sessilis. Indusium bifidum, laciniis ovato-orbiculatis obtusis, appressis, demum patentibus. Receptaculum indusio brevius, inferne cylindricum nudum, apice globoso-incrassatum et capsuliferum. Capsulæ lenticulares, oblique stipitatæ. Rhizoma repens, tenuiter filiforme, ramosum, sæpe præter radices alternas filiformes simplices ramosasque radiculis paleæformibus piliformibus copiosissimis instructum. Frondes stipitatæ, hygroscopicæ, teneræ vel tenerrimæ, sparsæ, plus minus in rhizomate distantes, transparentes, pinnatim divisæ, aut pilis apice stellatim ramosis (umbraculiformibus) præsertim in costis venis margineque ornatæ, aut sinuato-serrulatæ, serraturis subinde pilis simplicibus superatis, aut glaberrimæ, paginis conformibus. Stipes variæ longitudinis, teres. Raches teretes, utrinque prominulæ, sæpe una cum stipite margine foliaceo alatæ. Costæ teretes, prominulæ. Venæ pinnatim exorientes, alternæ, simplices aut sæpe ramosæ, internæ venulisque apice libero desinentes. Parenchyma e cellulis hexagonoideis constitutum, tenerum. Sorus in dente laciniave frondis terminalis, solitarius, sessilis, compresso-planus vel disco convexiusculus, parvus. Indusium e laminis frondis disjunctis formatum, fronde multo tenerius, e cellulis hexagonoïdeis constitutum, usque ad tres quartas vel quatuor quintas partes longitudinis bifidum, laciniis ovato-rotundatis aut orbiculatis aut obcordatis primo adpressis deinde patentibus, in compluribus speciebus margine vel pone marginem pilis apice stellatim ramosis ciliatis vel hirsutis, in aliis speciebus serratis, in aliis serrato-ciliatis, in aliis integerrimis. Receptaculum indusio semper brevius, inferne cylindricum et nudum, apice globoso- vel subgloboso-incrassatum spongiosum et ibidem capsuliferum, capsulis delapsis irregulariter cicatrisatum. Capsulæ lenticulares, margine undique annulo elastico circumdatæ, plus minus stipitatæ, stipite e prolongatione excentrica faciei capsulæ inferioris constructo, plus minus longo, continuo, nunquam septis transversis vel articulationibus quemadmodum in Filicaceis insignito. Sporæ tetraëdricæ, verruculis minutis punctulatæ."—p. 33.

This genus contains, besides seven new species, a great number of those which have usually been placed under Hymenophyllum; and the author arranges them under three subdivisions, which he names Stellata, Pilosa and Glabra: he speaks of the great difficulty of accomplishing a subdivision satisfactory to himself, and acknowledges the probability of better diagnostics being hereafter found: the names of the divisions now employed sufficiently show the characters he has selected.

1. *Stellata.*

1. S. hirsutum. Hymen. hirsutum, *Sw.* excluso synonymo Plumier. H. attenuatum, *Beyrich, Herb. partim.*

2. S. sericeum. Hymen. sericeum, *Sw.*

3. S. tomentosum. Hymen. tomentosum, *Kunze, Fil. Poeppig.*

4. S. interruptum. Hymen. interruptum, *Kunze.*

5. S. aureum, *Presl.* "S. pilis apice stellatim ramosis tomentosum flavescens, fronde lineari elongata pinnata utrinque obtusa, pinnis contiguis sessilibus lanceolatis acuminatis inciso-dentatis basi superiore truncatis subauriculatis inferiore cuneatis, rachi tomentoso-hirsutissima, stipite tereti glabro, soris immersis, indusio ad medium bifido, laciniis orbiculatis. Hymenophyllum aureum, *Beyrich, Herb.* H. sericeum, *Herb. Bras. Reg. Berol. n.* 190.

"Habitat in Brasiliæ Serra d'Estrella, ubi legit Beyrich, in Brasilia sine loci specialis indicatione collegit Sellow."—p. 57.

6. S. Plumieri. Hymen. Plumieri, *Hook. et Grev.* excl. syn. Plum. H. hirsutum, *Presl, in Rel. Hænk.*

7. S. Sieberi, *Presl.* "S. pilis apice stellato-ramosis ciliatum et in stipite costis venisque pubescens, fronde lanceolata utrinque acuta pinnata, pinnis lanceolatis angustato-acuminatis pinnatifidis basi superiore semiadnatis inferiore acutis, laciniis semiovatis obtusis obtuse dentatis, rachi alata, stipite tereti, soris .... Trichomanes alatum, *Sieb. Fl. Mart. Suppl. n.* 71.

"Habitat in Martinica, ubi legit Kohaut."—p. 58.

8. S. pulchellum. Hymen. pulchellum, *Schlecht.* H. attenuatum, *Beyrich, Herb.*

9. S. vestitum, *Presl.* "S. pilis apice stellato-ramosis ciliatum et in stipite rachi costis venisque pubescens, fronde lineari-lanceolata obtusa bipinnata, pinnis sessilibus oblongo-lanceolatis obtusis, pinnulis inferioribus tri-bifidis, superioribus indivisis laciniisque linearibus obtusis, rachibus stipiteque alatis, soris semiimmersis, indusii usque

ad medium bifidi laciniis orbiculatis adpressis ciliatis. Filicula digitata, *Plum. Fil. p.* 73, *t.* 50, *f.* B. Hymen. hirsutum, *Beyrich, Herb.*

"Habitat ad Rio Janeiro Brasiliæ, ubi legit beatus Beyrich; in Martinica legit Kohaut."—p. 58.

10. S. hirtellum. Hymen. hirtellum, *Sw.*

11. S. ciliatum. Hymen. ciliatum, *Sw.* Trich. ciliatum, *Weigell. Pl. Surin. in Reichenb. Herb.*

12. S. Grevilleanum. Hymen. ciliatum, *Hook. et Grev. Ic. Fil. t.* 35.

13. S. lineare. Hymen. lineare, *Sw.* Hym. species, *Herb. Bras. Reg. Berol. n.* 190, b.

14. S. Boryanum. Hymen. Boryanum, *Willd.*

15. S. commutatum. Hymen. Boryanum, *Raddi, Fil. Bras. t.* 79.

16. S. elasticum. Hymen. elasticum, *Willd.*

2. *Pilosa.*

17. S. diversilobium, *Presl.* "S. fronde glabra lineari-lanceolata utrinque acuta inferne bi- superne simpliciter pinnata, pinnis adnatis, inferioribus in tres, mediis (unius lateris, frondis duplo majoribus quam alterius) in duas pinnulas divisis, superioribus indivisis pinnulisque linearibus emarginatis denticulatis, denticulis ciliiferis, rachibus stipiteque alatis denticulato-ciliatis, pilis simplicibus, soris semiimmersis, indusii usque ad medium bifidi laciniis orbiculatis ciliatis.

"Habitat in Antillis? Schedula originalis deperdita, sed si non fallor, a beato Bertero in Hispaniola lectum."—p. 59.

18. S. Schiedeanum, *Presl.* "S. fronde ovata angustato-acuta bipinnata, pinnis sessilibus oblongo-lanceolatis obtusis, basi acutis, pinnulis linearibus emarginatis undulatis alaque rachidum denticulatis pilisque simplicibus ciliatis, stipite pilis simplicibus piloso apice alato, soris semiimmersis, indusii usque ad medium bifidi laciniis orbiculatis denticulatis ciliatisque. Hymen. ciliatum, *Schlecht. in Schiede et Deppe Pl. Mex. Exs.*

"Habitat in Mexico, ubi legit clar. Schiede."—p. 60.

19. S. trifidum. Hymen trifidum, *Hook. et Grev.*

20. S. pendulum. Hymen. pendulum, *Bory.*

21. S. cristatum. Hymen. cristatum, *Hook. et Grev.*

22. S. bivalve. Hymen. bivalve, *Sw.*

23. S. scabrum. Hymen. scabrum, *Less.*

3. *Glabra.*

24. S. infortunatum. Hymen. infortunatum, *Bory.*

25. S. australe. Hymen. australe, *Willd.*

26. S. ricciæfolium. Hymen. ricciæfolium, *Bory.*

27. S. rupestre. Hymen. rupestre, *Raddi.*

28. S. caudiculatum. Hymen. caudiculatum, *Mart.* H. ciliatum, *Herb. Bras. Reg. Berol. n.* 189.

29. S. productum, *Presl.* "S. glaberrimum, fronde oblongo-lanceolata angustato-acuminata bipinnata, pinnis sessilibus lanceolatis, pinnulis cuneato-oblongis, inferioribus quadri- trilobis, mediis bilobis, superioribus indivisis lobisque late linearibus obtusis emarginatis sinu obtuso interstinctis, terminalibus elongatis, rachibus late alatis, stipite

alato basi tereti, soris exsertis, indusii usque fere ad basim bifidi laciniis orbiculatis repandis receptaculo duplo longioribus.

"Habitat in Chili, ubi legit clar. H. Cuming."—p. 61.

30. S. dilatatum. Hymen. dilatatum, *Sw.*

31. S. crispatum. Hymen. crispatum, *Hook. et Grev.*

32. S. macrocarpum, *Presl.* "S. glaberrimum, fronde ovata acuta tripinnata, pinnis petiolulatis ovato-lanceolatis, pinnulis primariis lanceolatis obtusis, secundariis cuneatis tri- bifidis, laciniis linearibus obtusis emarginatis alisque rachidum undulatis, stipite alato basi tereti, soris exsertis, indusii usque fere ad basim bifidi laciniis orbiculatis emarginatis longitudine latioribus receptaculum triplo superantibus. *Cuming, Pl. Exs. Philip. n.* 130.

"Habitat in insulis Philippinis, verosimiliter in insula Luzon, ubi legit clar. H. Cuming."—p. 61.

33. S. badium. Hymen. badium, *Hook. et Grev. Cuming, Pl. Exs. Philip. n.* 112.

34. S. gracile. Hymen. gracile, *Bory.*

35. S. demissum. Hymen. demissum, *Sw.*

36. S. sanguinolentum. Hymen. sanguinolentum, *Sw.*

37. S. undulentum. Hymen. undulatum, *Sw.* H. fumaroides, *Chamisso, Herb. et Ind. Kaulfuss, Kunze.* Hymenophylli species, *Herb. Bras. Reg. Mus. Berol. n.* 188.

38. S. axillare. Hymen. axillare, *Sw.*

39. S. abietinum. Hymen. abietinum, *Hook. et Grev.*

Genus, HYMENOGLOSSUM, *Presl.*

"Costa utrinque teres, prominula, flexuosa. Venæ oppositæ, suboppositæ alternæque, angulo acuto exorientes, parallelæ, utrinque prominulæ, simplicissimæ, in dentes frondis marginatæ excurrentes, ante marginem obtuse desinentes. Sori in dentibus frondis apicales. Indusium...... Receptaculum...... Capsulæ...... Rhizoma repens, filiforme, glabrum, radicibus sparsis flexuosis simplicibus instructum. Frondes sparsæ, distantes, glaberrimæ, vix aut non hygrometricæ, firmiores quam in reliquis Hymenophylloideis, longe stipitatæ, oblongo-lanceolatæ, acutæ, basi acutiusculæ, excepta basi æqualiter vel subæqualiter obtuse dentatæ, tenuiter marginatæ, transparentes, in utraque pagina conformes, pallide virides aut purpureæ, duos usque tres polices longæ, in maxima latitudine (versus basim) decem lineas latæ, in stipite pendulæ. Stipes usque semipedalis, erectus, teres, filiformis, obscure flexuosus, glaberrimus, fuscus. Costa media utrinque prominula et teres, flexuosa, fusca. Venæ circiter lineam ab invicem distantes, oppositæ suboppositæ alternæque, angulo acutissimo exorientes, parallele excurrentes, rectæ vel læviter arcuatæ, simplicissimæ, prominulæ et inde frondem lineantes, in eodem numero ac dentes frondis obvenientes (pro quolibet dente una), libere apice obtuso desinentes. Venulæ nullæ. Parenchyma e cellulis hexagonoideis constructum. Sori in dentibus frondis terminales, cæterum ignoti."—p. 35.

1. H. cruentum. Hymen. cruentum, *Cav.*

The present Monograph places in a striking point of view the obligations conferred on Botany by the enthusiastic and almost unparalleled labours of our countryman, Mr. Cuming. Our readers cannot but observe how large a proportion of the new species are derived from this source, and it is truly gratifying to find that British industry

has accomplished so much, and that our countryman's labours are so highly valued and so honorably mentioned by the author, who of all living men is the most capable of appreciating them.

The work is beautifully illustrated with copper-plate engravings, a glance at which will be sufficient to convince a botanist of the value of the genera which the author has proposed, and at the same time will show the great importance of the fruit in distinguishing these interesting plants.

ART. CCXLVII. — *Correspondence relative to Carex paradoxa, &c.*

As the following communications relate to subjects which have lately been discussed in our pages, we have thought it better to include them all under one general head.

Hebden-bridge, September 9, 1844.

SIR,

I now beg of you to favour me with the insertion in 'The Phytologist,' of the following remarks on Mr. Luxford's note (Phytol. 1081). Mr. Luxford says that he deems it his duty to take up the cudgels, in behalf of two of his correspondents, and in one instance to expose something which appears *to him* like a mistake which I have made.

I shall not say here that I do not *very often make mistakes*, but I shall say that I have made no mistake about the discovery of Carex paradoxa in Ascham bogs. If Mr. Luxford will just refer to Mr. Spruce's note (Phytol. 842), he will find that that gentleman, in April, 1841, only discovered this plant as it had been discovered before, that is, as Carex teretiuscula. Mr. Spruce tells us that he at that time referred it, "though doubtfully, to C. teretiuscula." This may be correct; — Mr. Spruce might have some doubts as to the specific identity of the plant; — but when he sent it to his friends in 1841, he sent it under the name of C. teretiuscula, without expressing such a doubt. In June, 1828, I gathered this plant (Carex paradoxa) in Ascham bogs; but at that time having no description of C. paradoxa, I was, the same as Mr. Baines and Mr. Spruce, under the necessity of referring it to C. teretiuscula. And as Mr. Spruce concludes his note by telling us that C. teretiuscula does not grow nearer to York than Terrington Car, which is fifteen miles distant, and Ascham bogs being only three miles distant from York, it leaves no doubt of the plant which I gathered in Ascham bogs in the year 1828, and the one published in Baines's Flora under the name of Carex teretiuscula in 1840, being identical with the one that Mr. Spruce discovered in the year 1841. What *honor* Mr. Spruce or any other person can possibly have in being the discoverer of a new plant, I am totally at a loss to comprehend, knowing as I do that such an occurrence is merely a matter of chance.

And as far as regards Mr. Sidebotham's *mistakes*, I will just tell Mr. Luxford (as it appears he has forgotten), that the subject of these Carices was no private one, and that when Mr. Sidebotham was asked for the plant, it was not for the purpose of *perfecting a series, but purely with the intention of coming at the truth of a public dispute.* And as Mr. Sidebotham knew this, he would have done much better if he had acknowledged his inability to comply with Mr. Babington's wish, than to have sent him something that would tend to lead him into error. Such a request as Mr. Babington's ought not to have been attended to in a careless manner; but on the contrary, a little more than ordinary care should have been bestowed. Mr. Luxford may think that the mistake should have been set right by a private letter; but I will now tell him that this was no private affair. When I received the letter in question, as I had been previously called on to show why Mr. Sidebotham's specimens did not agree with the description which I had given of my Carex pseudo-paradoxa. And further, Mr. Luxford must recollect that Mr. Sidebotham's mistake was between Mr. Babington and himself, and although I was deeply interested, I had no part in it.

Yours respectfully,

SAML. GIBSON.

To the Editor of 'The Phytologist.'

York, 3rd of 9th Month, 1844.

I have a specimen of Carex paradoxa in my herbarium, which was gathered at Ascham bog, by my father, in 1818. The C. teretiuscula of Baines's 'Flora of Yorkshire' refers to this specimen; thinking it *most* resembled C. teretiuscula, my father named it accordingly. The specimen has since been shown to R. Spruce, who pronounces it to be C. paradoxa. I believe C. teretiuscula is not found at all in Ascham bogs.

JAS. BACKHOUSE, JUN.

Welburn, Yorkshire, Sept. 17, 1844.

Note on Carex paradoxa.—As a companion to Mr. Luxford's note (Phytol. 1021), allow me to call the attention of your readers to a remark by Mr. Teesdale, in his 'Supplement to the Plantæ Eboracences,' read before the Linnean Society, Dec. 4, 1798, and published in the 5th vol. of their Transactions. Under Carex paniculata is the following:—"*Obs.* We have in the marshes a variety of this, with a small compact panicle, which never forms itself into large tufts, as the C. paniculata does. It probably may be a distinct species." I should conclude at once that the plant here alluded to was C. paradoxa, were it not that the tufts formed by that species are precisely like those of C. paniculata, so far as I have ever observed. The former, it is true, is the smaller plant, and the stools are consequently smaller, though equally dense; and if Mr. Teesdale's words can be understood to imply that his Carex *does* form tufts, though *scarcely so large* as those of C. paniculata, I think no doubt will remain of his alluding to C. paradoxa. It is not improbable that C. paradoxa may have been gathered many times in Yorkshire for C. teretiuscula, and I have lately seen it under this name in the collection of Mr. Backhouse, who gathered it in Ascham-bogs some twenty years ago. As to Mr. Gibson's complimentary mention of me (Phytol. 1042), I look upon it as a sort of "note of thanks" for some fine specimens of Carex paradoxa he had from me, and which I have reason to believe were the first he had ever seen of the species, as I have not since heard from him in any shape. I did not think it worth while to notice Mr. G.'s misrepresentation, for *to him* "it is a matter of little importance" *to be correct;* and I suppose I need not remind him that something more is necessary to entitle a person to the name of a "discoverer," than merely being the first to gather a plant; he ought also to be able to distinguish it from every other species known to exist in the same country, and (if practicable) to make it known under its true name: otherwise might the "natives" of Teesdale be considered the discoverers of Gentiana verna, because they have been, from time immemorial, accustomed to decorate their hats and bonnets with its beautiful blossoms.

RICHARD SPRUCE.

Lane House, Luddenden,
Near Halifax, Sept. 13, 1844.

Sir,

While I have my pen in my fingers, just allow me to contradict a misstatement in Mr. Gibson's paper (Phytol. 1039), where he says that I "asked Mr. Sidebotham for my Carex pseudoparadoxa, and he sent him specimens under that name." This is not correct; nor did I ever tell Mr. G. so. Once, when I was in company with Mr. Sidebotham, he gave me a single specimen (the only one I ever possessed) of that plant, which he chanced to have by him. Soon after which, I had the opportunity of seeing Mr. G.'s specimens, when I said to him that they looked different from the one which Mr. S. had given me, little thinking that he would betray me in the way he has done, as I did not consider myself a competent judge, and any one knows the difficulty of judging from a single specimen, especially when that specimen is in an imperfect state. I have asked Mr. G. for a specimen of the plant, but he *never would* give me one.

As Mr. Gibson upbraids Mr. Sidebotham with making mistakes, I would caution him to beware of making them; for I have a specimen of Carex paniculata in my herbarium, which he gave me under the name of *C. teretiuscula*, labelled with *his own hand*. This was either a mistake, or something worse. At that time both the above species were strangers to me.

Samuel King.

[Although the above communications scarcely require a comment, yet we cannot refrain from saying in reference to the first part of Mr. Gibson's note, that we hardly comprehend how a botanist, in consulting Baines's Flora, could possibly know that Carex paradoxa was intended by the Carex teretiuscula recorded in that work, seeing that the name of the plant is unaccompanied by any note, or mark of doubt, expressive of its imperfect accordance with the descriptions. We may also embrace this opportunity of stating, that having hitherto printed Mr. Gibson's contributions in so full a manner as they certainly would not have commanded, had not a cry of unfair dealing been raised by some of that gentleman's admirers; and having thus manifested our desire to afford Mr. G. ample opportunity of defending himself from attacks which, we are sorry to say, he has, in most cases, provoked;—we must now consult the wishes of the majority of the readers of 'The Phytologist,' by reducing within reasonable limits, any future contributions with which we may be favoured by Mr. Gibson.—*Ed.*]

Art. CCXLVIII.—*Additional Plants found about Saffron Walden, during the Summer of* 1844; *with Remarks on some of the Species.* By G. S. Gibson, Esq.

Papaver somniferum. Ditch-banks, &c., rare; an outcast from gardens.

Hypericum maculatum. Woods and moist hedge-banks in several places. It appears clearly distinct from either H. perforatum or H. quadrangulum, for which it is probably often overlooked; but I cannot think it more than a slight variety of H. dubium, having the broad, obtuse, reflexed sepals mucronated instead of entire, and the petals slightly streaked with purple. Probably it is not an uncommon plant in most parts of England.

Rubus Koehleri. Hedges on the Ashdon-road.

R. villicaulis. How-wood, Littlebury.

This genus is so intricate, and such a remarkable diversity of opinion exists as to the distinction of the species, and also as to which species many of the variable forms are to be referred; that I feel some hesitation in giving names to them: yet those who have paid attention to the subject, must feel satisfied that there are a considerable number of *really* separate species, and I cannot doubt that these two are among the number. They agree with authentic specimens so named by E. Lees, the great authority for this genus, which I have received from the Botanical Society of London. I wish the attention of botanists were more drawn to this tribe of plants, which requires much further examination, but is too often passed by, either as undeserving of notice, or so intricate as to render the investigation of it a hopeless task. But surely it deserves equal attention with other genera; and the only way to clear up the difficulties connected with it, can be by patient observation in various localities.

Rosa systyla. Hedges, rare.

R. inodora and *micrantha?* Not common. Introduced here on the authority of Joshua Clarke.

Galium Vaillantii. This plant, which I believe has not been hitherto noticed in Britain, was discovered by myself last month, in a field adjoining this town; it grew in tolerable abundance, and was intermixed with G. Aparine. The crop on one part of the field was barley, on the other, clover, grown from *English* seed. It was found among *both*, and therefore could not have been recently introduced with the seed; independently of which, it is the opinion of the growers of clover, that the process through which it passes would not permit seed of this size to remain among it uninjured; moreover, in a field sown with the same seed, I was unable to find any trace of this plant: if, therefore, originally introduced, it must have been years ago, and may now be considered completely naturalized.

A doubt exists among several eminent continental as well as English botanists, as to the claim of this plant to rank as a species; and they are inclined to consider it a variety of G. Aparine, while many others believe it to be really distinct. From pretty close observation upon it in this locality, I cannot but think that the latter will prove the correct view of the subject. A considerable difference of sentiment doubtless exists, as to the definition and limits of species; but if it be correct to consider clear and constant differences, which do not generally admit of intermediate forms, sufficient to constitute species, surely this must be entitled to rank as such. These are, 1. The minute size of the flower, and its greenish colour; never white, as in G. Aparine. 2. The remarkably branched dichotomous character of the inflorescence, which is most striking in an advanced stage of growth. 3. The invariably small size of the fruit, which is not half the size of that of G. Aparine, and is usually more shining in appearance. The habit of the plant, too, is somewhat different, being generally less branched, and of a lighter green colour, but they are nearly alike in size. I have not been able to find intermediate forms between the two plants, so that though growing often entwined together, they are at all stages of growth readily distinguishable, even by superficial observers; therefore it appears that these characters are constant, and the fact of the plants being thus intermixed, renders it impossible to account for their variations by difference of soil or situation.

Though hitherto only noticed in one spot, I think it very likely to be found in other localities throughout the kingdom, having probably been overlooked as Galium Aparine. If such be the case, its claim to be considered a native plant will be strengthened.

Tragopogon pratensis. Meadow at Walden. I am unable to discover in the descriptions or specimens of this species, any clear distinction between this plant and T. minor, except the length of the florets; but this character is a variable one, as I have gathered specimens this year, in the same field, some with the florets equal to, or rather exceeding, the calyx in length, some with the calyx twice the length of the florets, with intermediate varieties. Can this, therefore, be considered sufficient to constitute it a distinct species, although the extreme forms certainly present a very dissimilar appearance?

Crepis biennis (the true plant). Chalky banks near Littlebury, rare.

Hypochœris maculata. Open hills near Hildersham.

Mentha viridis and *piperita.* Ditch-banks near Old Sampford.

M. gentilis? Road-side near Walden.

Cuscuta Epilinum. Very destructive to the crop of flax in a field near Thaxted.

C. Trifolii has not been noticed here this year on clover, but I found it on a bank in the field where it was first discovered, growing on Centaurea Scabiosa, Achillæa Millefolium, Convolvulus arvensis, and other plants within its reach, indiscriminately. There has been no clover in the field for two years, so that it does not seem to confine its attacks to that plant, or to require its presence.

Symphytum asperrimum. Duck-street, between Audley End and Littlebury. It has grown there for several years, but probably may have been originally introduced with rubbish from some garden.

Chenopodium urbicum. Rubbish-heaps, rare.

Atriplex deltoidea. Ditch-banks in the Park, sparingly.

Rumex pratensis. Ditches near the Thaxted road. This plant, if rightly named, and I have the authority of an eminent botanist for believing it to be so, I cannot think other than a variety of R. obtusifolius, as the form of the enlarged petals is very variable, even on *the same plant;* and there are gradations from the long, ligulate form of R. obtusifolius, to the small, triangular one of R. pratensis: the breadth of the leaves is also uncertain.*

Populus canescens. Near Chesterford-common.

Allium ursinum. Nun's wood, Walden.

Carex strigosa. Ditto, rare.

C. lævigata. Burton-wood, near Chesterford.

Phleum Boehmeri. Dry hills among sand, at Hildersham, but now very scarce, the land being mostly enclosed and cultivated. Can any of your correspondents point out any other good localities for this grass in other parts of England, or is it confined to a small district in Cambridgeshire?

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* It is curious to notice the differences in the descriptions of R. obtusifolius, given by Hooker and Babington. The former says that the whorls are "rather *close*, somewhat *leafy*," the latter that they are "*distant*, *leafless;*" such a discrepancy is remarkable, but the fact is, that specimens *may* be found agreeing with either of these descriptions. As far as my observation has extended, the whorls are generally more or less *leafy*, but vary extremely in distance. Surely then such variable characters should not be introduced as distinctive peculiarities of the species, as they must tend to perplex rather than assist the young observer.

Barkhausia setosa has not reappeared, being doubtless, as before suggested, introduced with clover-seed from abroad; it may however be expected as an occasional visitant.

A species of Phlox, which I noticed this summer at Darlington and elsewhere, has been found at Sampford; and Lepidium sativum is often seen by road-sides &c. It is not unlikely that both these plants may ere long find their way into the list of naturalized species.

It is probable that a few other plants will occasionally be discovered in this neighbourhood, as it is many years before even a limited locality is thoroughly explored, and there will always remain some fields, woods and hedges unexamined, which may produce a rare or local plant, confined to one spot in the district.

G. S. Gibson.

Saffron Walden, October, 1844.

Art. CCXLIX. — *Notes of a Botanical Ramble in Yorkshire &c. in the Summer of* 1844. Communicated by James Backhouse, Jun.

(Concluded from p. 1093).

On the 11th of 7th Month our party again set out from Settle, and crossed the hills toward Malham. On these we saw Thlaspi alpestre in abundance, especially on the rubbish at the mouth of the lead-mines. We gathered fine specimens of Polemonium cæruleum in the fissures of some limestone rocks, near Malham-cove, where a valley is suddenly closed in by a huge cliff, from under which a small stream emerges. Here we noticed Draba incana, Geranium sanguineum, Pyrus Aria, and the remains of Draba muralis, which, as well as Hutchinsia petræa, was now dried up. Leaving this place, we crossed a ridge of hills to Gordale-scar, a deep cavernous ravine in the limestone, where the overhanging cliffs present a striking and fearful aspect. At the further end of this opening we ascended the tumbled rocks of a waterfall, which pours from under a natural arch into the chasm beneath. Near this place we saw Hieracium Lawsoni, Hippocrepis comosa, Epipactis ovalis, Equisetum variegatum, Potentilla alpestris, Ribes petræum, and a remarkable form of Rhinanthus Crista-galli, which however passed into the common one. In a boggy piece of ground near Malham Tarn, we gathered Bartsia alpina, and on the adjacent crag, Polypodium calcareum, Ceterach officinarum, and a few specimens of Hieracium hypochœroides. A high wind ruffled the waters of the tarn, and brought considerable quantities of Potamogeton lucens, perfoliatus and prælongus to the shore.

On Arncliffe Clowder we found abundance of Dryas octopetala ? but owing to the lateness of the season, it was chiefly out of flower. This plant is strikingly different from that found in Teesdale, and may possibly prove a distinct species. We passed the night at a comfortable little inn at Arncliffe, and the next morning bent our steps towards Hesletine Gill, where we gathered Potentilla alpestris, Avena alpina, Myrrhis odorata, Actæa spicata and Saxifraga umbrosa var. *crenata*, the latter in great abundance. On the rocks near the head of the Gill, we saw Hieracium Lawsoni, and a Poa, probably P. nemoralis, var. *glauca*, and on the slope above, Crepis succisæfolia, Hieracium prenanthoides and rigidum ? We next ascended Pennyghent, from the summit of which we had a fine and extensive view, though much the same as that from Ingleborough. We descended the mountain on its western side, which is steep, and in some places precipitous. On the millstone-grit rocks we noticed Salix herbacea and Sedum Rhodiola in profusion, and on the limestone, Saxifraga oppositifolia. The violence of the wind prevented our exploring this part completely, and we consequently passed on towards the village of Horton, where, by the side of a brook, we found Mimulus luteus and Mentha citrata. Near this place we visited a remarkable bog, called Helwith-moss, on which we noticed Habenaria bifolia and chlorantha, growing together, but still retaining their distinctive characters; also Vaccinium Oxycoccos, Carex curta and Andromeda polifolia. In this neighbourhood, Rumex aquaticus, Trollius europæus, Polygonum viviparum, Potamogeton pusillus and Hippuris vulgaris were plentiful. After a fatiguing walk of sixteen miles, we again reached our comfortable quarters at Settle.

On the following day we visited the celebrated cave near Clapham; it is situated about a mile from the village, and near the extremity of a picturesque valley. This magnificent cavern is about 1000 yards in length, and from its noble stalactites is probably not equalled by any other cave in the British islands. Far removed from the light of day within its deep recesses, we noticed a plant of the Fungus tribe, probably Rhizomorpha subterranea, spreading its root-like branches on a dripping mass of petrifaction. Leaving the cavern, we attempted to cross the moors, in order to visit some localities for rare plants on the way to Settle; but in consequence of dense fog, with rain and wind, we missed our way, and came upon one of the extensive "limestone pavements" with which this neighbourhood abounds, and after wandering for some time, found ourselves two miles further from the point of our destination than the place from which we started.

On the 13th of 7th Month, after parting from our kind friend, J. Tatham, we left Settle by coach, and reached York that evening, having greatly enjoyed our excursion in the "mountain country."

On the 18th, two of our party again proceeded into Teesdale, in order to examine more fully the locality of Alsine (or Spergula) stricta. We noticed Linaria purpurea on the cliff below the ruins of Barnard-castle.

We reached Widdy-bank Fell about 6 o'clock that evening, and after a long and careful search succeeded in finding the plant. Being out of flower, it was with difficulty detected, and this difficulty was much increased by its growing with Arenaria verna, which was also out of flower. With the exception of one solitary piece, we only found it in the limited locality where it was first discovered, though we searched many other likely places on the mountain very carefully. Some authors have referred this plant to Spergula, some to Alsine, and others to Arenaria; it has however a decidedly three-valved capsule, which necessarily places it in the genus *Alsine*.

We discovered another fine plant of Woodsia ilvensis on a part of Falcon Clints, far distant from the old locality; likewise another solitary plant of Saxifraga umbrosa, var. *crenata*. On the way we collected some more specimens of Hieracium Lapeyrousii, which was just opening its flowers.

Art. CCL.—*Facts about the Nomenclature of Plants in the London and Edinburgh Catalogues.* By Hewett C. Watson, Esq.

Some correspondents of 'The Phytologist' (Phytol. 972, 1077) have been inditing censures, in the disguise of queries, on the nomenclature of the 'London Catalogue of British Plants,' compared with that of Edinburgh. An importance is given to those censures, which they would not in themselves possess, by an editorial note (Id. 974) being attached to one of the letters. And since 'The Phytologist' has thus spread abroad, and given weight to, censures which are not in accordance with facts, I beg leave to say a few words upon the subject; although I cannot, like my friend Mr. Dennes, call myself an office-bearer in the Society.

It is virtually stated by Mr. Sidebotham, though put as a query (Id. 972), that the Edinburgh Catalogue makes the names of British plants correspond with those in use on the continent, by correcting errors in other lists and works. Mr. Sidebotham does not specify any continental authority; nor, probably, was he able to do so. But the editorial note more expressly refers to Steudel's 'Nomenclator Botanicus,' as an authority which should form the basis of a new Catalogue of names and synonymes. That work is, indeed, a most valuable and important one; and it is constantly in requisition with botanists, as a work of reference which is indispensible to every writer on plants, when names and synonymes have to be ascertained.

Under these circumstances, a comparison between the Edinburgh Catalogue and Steudels' work may fairly be instituted, to show how close is the correspondence between the Catalogue and the great continental authority for names. They both bear the date of 1841, but of course the Nomenclator was much longer in printing. Now, I find that as the names of species stand in the Edinburgh Catalogue, nearly two hundred of them are given by Steudel as synonymes only. They are thus not the names which this continental authority deems most properly applied to the plants. If we add, further, some score or more of names in the Edinburgh Catalogue, which have no place at all in the work of Steudel (Atriplex deltoidea, Cerastium atrovirens, &c.), we may say that *upwards of two hundred names* in the Catalogue differ from those applied to the plants by Steudel. This is a very large proportion, exceeding *one in every eight names.* The Edinburgh Catalogue includes nearly 1600 reputed species.

After this example of alleged correspondence, let us now look at the contrary example of alleged difference. The plan of the London Catalogue, rejecting dubious species and many very dubious natives, necessarily reduces the sum total. The list of indigenous and introduced species, including the sub-species of Rubus, amounts to 1464; but as nearly thirty of these are additional species, not in the Edinburgh Catalogue, the proper comparison must be made on the other 1435. It is troublesome to compare an arranged with an alphabetical list very minutely; but on going over the two, I find only about eighty species in the London Catalogue whose names differ from those in the Edinburgh Catalogue. This is a proportion of about *one name in every eighteen.*

There is something amusing, truly, in such a result. The Catalogue which is praised for corresponding with continental authorities, actually differs from the great continental authority for nomenclature, to the extent of *one-eighth* of the whole. But the Catalogue which is blamed for not corresponding with that of Edinburgh, actually differs from it only to the extent of *one-eighteenth!*

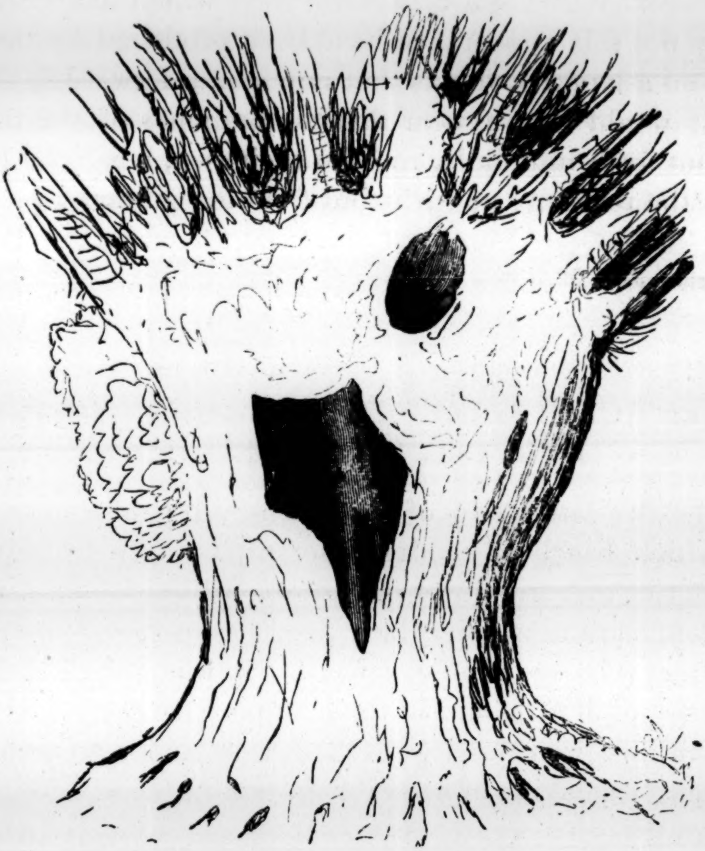
I have not leisure to pursue the comparison further, but am disposed to believe, that the eighty names of the London Catalogue, which differ from those of the Edinburgh Catalogue, would be found more frequently in use in continental works, than are the corresponding names or synonymes of the Edinburgh Catalogue: not in each individual instance, probably, but on the average of the whole. Moreover, so many of the plants which appear as species in the Edinburgh Catalogue, are enumerated as varieties only by Steudel, that it seems likely enough the London Catalogue may be nearer to the Nomenclator in this respect, although I cannot say so with certainty. The truth is, that continental authors of influence and reputation differ among themselves fully as much as (and probably more than) our British authors. Particular foreign authors might be selected, with whose works the Edinburgh Catalogue is in closer correspondence; but my own supposition is, that the names of the London Catalogue, on an average, correspond better with those in the greater number of continental publications. Let it be observed, the differences in the two Catalogues are seldom on questions of right or priority; but turn more frequently on the greater or less subdivisions (and consequently re-naming) of old established genera. Thus, the Linnæan genus Poa appears under two names in the London Catalogue, but under three in that of Edinburgh. The Linnæan genus Scirpus is retained in the London Catalogue, but subdivided into Scirpus, Isolepis and Eleocharis in that of Edinburgh; yet so little natural is this subdivision, that we find S. multicaulis and pauciflorus — species so like as to be constantly confounded—put into different genera.

HEWETT C. WATSON.

Thames Ditton, October 2, 1844.

[There appears to be some slight misapprehension on the part of both Mr. Dennes and Mr. Watson, with regard to certain portions of Mr. Sidebotham's note, and of the editorial note appended thereto. 1. We do not find that Mr. Sidebotham anywhere *praises* the Edinburgh Catalogue for "corresponding with continental authorities," he says that it "*was to* make our names agree with the continental ones," not that it had done so. 2. The tendency of the editorial note is, on the whole, approval of the London Catalogue, mingled however with regret that uniformity of nomenclature has not hitherto been attained, and inviting correspondence on the subject. This, indeed, is expressly stated at the outset of the note; and the omission or alteration of a single word — a mere *lapsus calami* — would take away even the *appearance* of censure. *Ed.*]

Art. CCLI. — *Note on Yew Trees.* By W. Wilson, Esq.



Yew-tree in Bowden Church-yard, Cheshire.

An account of a tree within a tree has lately appeared in the newspapers; and it is worthy of remark that there is a curious old yew-tree in Bowden church-yard, Cheshire, which presents an analogous appearance. The rude sketch now sent was taken on the spot. The tree is about 5 feet in diameter in the thinnest part of the trunk, hollow and decayed on the east side. Within the hollow, about 6 feet from the ground, a thick, forked, root-like stem, apparently connected with one of the principal branches, has at some distant period, but subsequent to the decay of the trunk, commenced its downward growth, and is now of considerable thickness. It is covered with its own cortical layers. Behind this there is a smaller separate root, about an inch in diameter, proceeding in a slanting direction from the right to the left.

About eight years ago, when passing the celebrated yew of Fortingal, in Perthshire, I was induced to examine its remains, then surrounded by a walled inclosure; and from what I saw, my impression was that the entire circumference marked by the remains, had not been that of a solitary tree, but of several trees which had grown in a circle. May not this appearance have been produced by the same process, but on a larger scale, as that now going forward in the Bowden yew? It would thus appear that the branches of the tree make an effort to put forth internally, roots of their own, when the trunk ceases to convey the requisite nourishment from the ground.

W. WILSON.

Warrington, July 22, 1844.

ART. CCLII. — *Three Days' Botanizing at Selborne.*

By T. BELL SALTER, M.D., F.L S.

TOWARDS the latter end of last month, I paid a short visit to the village, which has been rendered so surpassingly interesting by the observations of that true lover of Nature, Gilbert White; whose place and residence are now come into the possession of my much loved and excellent relative, Professor Bell. It was during a short visit to the residence of *White*, and in the company of *Bell*, that the following observations were made, — association and associate to inspire great things. Speaking of association, tempts me to add what I know must be gratifying to every naturalist, which is this; — that the present owner of Selborne Park preserves with the most sacred care all the local reminiscences of his illustrious predecessor—reminiscences, which are neither few in number, nor devoid of interest, but which it would be out of place further to allude to here.

With the habits of many of our birds the name of Selborne has long been, and will long continue to be, associated, from the circumstance of the originality and truthfulness of White's observations, and from the very remarkable fact, that notwithstanding the time which has elapsed, better observations have not since been made. The graphic descriptions of this good man have also associated with the name of Selborne an idea — I had almost said a feeling — of all that is picturesque in Nature, and rustic and primitive in the manners of its simple-minded habitants. So numerous are the observations first made in this sequestered place, that one can imagine it to be the favoured resort of the feathered tribes: — and so may it well be; for it is truly gratifying to find that no amount of early impressions are likely to carry one's fancy beyond the reality of its native charms. For my own part, there was no anticipation which was not surpassed; and what was the more gratifying to myself as a botanist, was to see very clear indications that the district is likely to prove not less rich to the botanist than to the zoologist.

It was too late in the season to expect to do very much in botanizing, but I soon observed sufficient to be aware that not only might a very rich collection be obtained here, but that also very many most interesting observations might be made in this district, as respects geological Botany.* My time was not sufficient to make extended observations, nor am I myself a geologist, but I was so much struck with some of the peculiarities of this situation, that I cannot refrain from mentioning them.

Selborne is situated at the junction of the upper green sand and chalk formations, and the general fact of the fertility of the soil at the junction of any limestone and sandstone series, holds good here to a remarkable degree. The well known beech *Hanger*, which is on the west side of Selborne, is on the chalk, which is also the case with the beautifully wooded *Nore Hill*, two miles to the south of Selborne. The general aspect of the landscape is decidedly hilly,† and nearly all the hills slope gently to the west, and precipitously on the east side, which sides are very generally overgrown with wood, and designated *hangers*. Passing to the east from Selborne, the level is diversified as above mentioned, but its general tendency is that of a declivity, until, at a distance of about three miles, you arrive at a large sandy flat, which is composed of the lower green sand. The intermediate part consists of the chalk marl and upper green sand, comprising, I am informed, some very remarkable modifications of these, which are highly interesting in a geological point of view. In its unbroken state, the soil of this district is stratified rock or free stone, varying in its proportions of lime and sand. This is seen in the beautiful *rocky lanes* or *hollow ways*, so graphically described by White, and which yield well in the spring and summer. In the fields we have soils of sand and lime in the most varied proportions; and it is this feature which renders the botanical distribution so striking. One is surprised at the sudden transition, in many cases, from a Botany which is that of the limestone or chalk, to one which is essentially that of a sand district; and in other instances by the mixture of both.

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* In speaking of *geological Botany*, I believe I am guilty of coining a new term; but I have often observed that the relations between the vegetation of different parts of a district, and its Geology, are most interesting, and would furnish a field for observation, not less interesting than the *geographical* distribution of plants, or rather, I should say, form a most interesting subsection of this branch of Natural History. In an agricultural point of view, such observations might be rendered of great benefit, as by them it might be judged, from the Botany of the fallows, what kinds of manure were required.

† Though very *hilly*, I cannot accord with White in applying the word *mountainous* to this district.

In addition to the hangers and rocky lanes, I must mention one or two other features or localities. In the first place there is the *Lith*, a beautifully wooded vale, running east from Selborne, through which a very pretty stream takes its meandering course.

Wolmer forest is well described by White. The total desolation of the scene and the sterility of the soil, are still just as he describes them. But I cannot refrain from noticing the strange resemblance of the shore of Wolmer pond, to that of a creek of the sea. There are the same loose white sand without mould, and here and there the barren black mud so usual in marine places: and even the vegetation increases the resemblance;—the turf of innumerable plants of Littorella lacustris, so much resembling both Plantago maritima and Armeria maritima; and the stunted oak and starved willow have the aspect of those which have suffered from the salt sea gales.

Short-heath, which is to the north-east of Selborne contains more depth of soil, and furnishes some good bog ground, abounding with Droseræ, Anagallis tenella, Lycopodium inundatum and Polygonum minus.

Such a diversity of soil and situation promises much, and I think the following list, being one of only three short days' botanizing, and these late in the month of September, gives promise of many good things to those who can give more time to this locality, and at a more auspicious season.

Ranunculus sceleratus, *hederaceus* and *aquatilis*. Short-heath.

Nasturtium terrestre. Short-heath.

Saponaria officinalis. In a hedge near the Priory.

Cerastium vulgatum. Temple and Emshot.

Radiola Millegrana. Abundant at Wolmer-forest and Short-heath.

Epilobium angustifolium. Very common in the hedges about Selborne.

——— *roseum*. Selborne, near Oak-hanger, and abundant on Short-heath.

Pyrus Aria. Week-hill hanger, Nore hill.

Lathyrus sylvestris. Nr. Week-hill hanger

Drosera longifolia and *rotundifolia*. Wolmer-forest and Short-heath.

Sison Amomum. Rocky lanes, frequent.

Helosciadium inundatum. Wolmer-forest and Short-heath, plentiful.

Œnanthe fistulosa. Short-heath.

Callitriche autumnalis. In a ditch between Temple and Wolmer.

Sambucus Ebulus. Hedge in Selborne-park.

Bryonia dioica. Frequent about Selborne.
Jasione montana. In the Lith, at Wolmer and Short-heath.
Conyza squarrosa. Week-hill hanger.
Prenanthes muralis. Rocky lanes, very co.
Hieracium sylvaticum. Wolmer-forest & rocky lanes about Selborne.
——— *umbellatum.* Rocky lane near the Grange.
Fedia dentata. Nore hill.
Veronica Anagallis and *scutellata.* Short-heath.
Scutellaria minor. Wolmer-forest.
Lycopus europæus. Near Temple.
Mentha sylvestris. In the Lith.
Polygonum minus. Short-heath.
Littorella lacustris. Wolmer-forest and Short-heath.
Rhynchospora alba. Short-heath.
Juncus squarrosus. Wolmer-forest, and Short-heath.
Scirpus sylvaticus. By the bridge at Oakhanger, and in a swamp at the foot of Week-hill hanger.
Poa nemoralis. In a bank between Week-hill farm and the Hanger.
Lastræa multiflora. Dry ditch at Wolmer
Polystichum aculeatum. Honey-lane and near Emshot.
——— *angulare.* Honey-lane and near Emshot, sparingly.
Athyrium Filix-fœmina. In a shady dell near Emshot-church.
——— ——— var. *molle.* In a dry ditch at Wolmer-forest.
Lycopodium inundatum. Short-heath

I have not mentioned in this list so common a plant as Calluna vulgaris, but it worth noticing that the greater part of this plant, which abounds at Wolmer, is of the most hairy form.

We did not at Wolmer see any of the Vaccinium Oxycoccos, mentioned by White as growing there, but it must be tolerably abundant in some parts, as we met a poor woman with a handkerchief full, which she had collected for tarts.

The Epilobium angustifolium mentioned above must, a little earlier in the season, be a very great ornament, as it grows very tall, and in great profusion. Epilobium roseum was growing in a rather unusual kind of locality. I had never before seen it except in cultivated ground, and, with the exception of one garden at Salisbury, never far from London. In the present instances it was growing in loose sand, by the side of running water, in very considerable abundance. The flowers were unusually pale and little expanded, and what was further noticeable, it was always growing with E. parviflorum, of intense colour.

The Sambucus Ebulus growing in the park, could not have been growing there in White's time, as he mentions the plant in his catalogue, but not as growing so near him. It might possibly have been planted by him.

White speaks of the lanes as abounding in ferns; my impression was decidedly the reverse. It is remarkable that Polystichum aculeatum and P. angulare were generally growing together, but both in their most pronounced forms, the former being almost of the mountain or lobatum form.

A large yew-tree growing in the church-yard deserves notice. We measured the trunk, at what appears the point of its greatest circumference, which was about four feet from the ground, and found it to be at that part twenty-four feet and eight inches; but the Rev. —— Parsons, the present incumbent, informs me that at one part it measures twenty-seven feet.

The maples growing in the park deserve some notice. From a large knotted mass of wood, rise from six to eight stout trunks, averaging a circumference of about three feet each. These all ascend, slightly diverging, and forming as it were a compound trunk. At the height of about fifteen feet they break into one magnificent head, not inferior to a very respectable sycamore. There are in the park many such groups, or rather compound trees.

I have omitted all mention of the Rubi from the above list, not because there were few forms, or that they were devoid of interest, for it was quite otherwise, but because they are still *sub judice*.

T. Bell Salter.

Ryde, Isle of Wight, October, 1844.

Art. CCLIII. — *Remarks on some Species of Chenopodium.*

By Geo. Fitt, Esq.

Having lately paid some attention to the undermentioned species, with the view of satisfying myself that they are all really distinct, I send you the result of my observations.

Chenopodium intermedium. Leaves triangular, slightly attenuated at the base, inclining to hastate, deeply and irregularly toothed, *teeth acute*, dull green, not shining, *mealy* beneath, somewhat leathery in texture; leaves on the spikes toothed, seldom entire, those of young plants blunt, hastate, and but slightly toothed. Spikes long, somewhat leafy, clusters distant; seeds flattened, as large as rape-seed, rough; calyx 5-cleft. Stem angular, strong, erect.

Smell of the whole plant rank, especially the calyces.

C. rubrum. Leaves nearly rhomboid, seldom triangular, deeply and irregularly toothed, *teeth blunt*, shining, fleshy, upper ones scarcely toothed, those of the spikes generally entire, rhomboidal or ovate: in some plants the large leaves of the stem are nearly triangular, slightly attenuated at the base, resembling those of intermedium, and in others they are almost three-lobed. Stems angular, generally erect, occasionally procumbent and with leaves not fully developed, when the plant somewhat resembles C. botryodes. Spikes compound very leafy, and the clusters much crowded. Seeds one fourth the size of those of C. intermedium, rather rough and flattened. Calyx in three deep segments, edges membranaceous.

Smell scarcely unpleasant.

C. botryodes. Leaves triangular, inclined to hastate, shortly attenuate at the base, slightly toothed, the *teeth acute*, lower leaves very blunt, almost rounded and *entire;* small upper leaves, and those of the spikes sometimes rhomboid: in luxuriant specimens, a few leaves are sometimes deeply and acutely toothed, hastate and pointed: in their general form they resemble those of C. Bonus-Henricus, with the addition of the teeth, but in texture they are like those of C. rubrum and C. intermedium; in the figure in Smith's 'English Botany,' they are made too pointed and lengthened, the figure is otherwise characteristic: tinged with crimson, especially beneath. Stems weak, procumbent, of a deep crimson colour.. Spikes rather leafy, resembling those of C. intermedium, the clusters even less crowded. Seeds as small as those of C. rubrum, in a loose skin, vertical. Calyx closed over the fruit so as to appear entire, and bursting in three short segments.

When fresh-gathered, the smell is like that of the pods of green peas.

I omitted to examine the flowers when in season. On the end of the spike of this species there is generally a central 5-cleft calyx.

I have always found C. intermedium constant to the above characters; and by its very rank smell, larger seeds, and the uniformity of its leaves, it may be readily known from C. rubrum.

C. botryodes, in general appearance and habit, is more distinct from C. rubrum than the above. It is by no means a variable plant. its lower leaves are always the same in form and texture. During the last two years I have observed the growth of some hundreds of plants; and I have now before me a score of good ones, besides dried specimens; and yet I have not, that I recollect, met with one about the identity of which I have had the least doubt. It often grows side by side with C. rubrum, although they do not usually inhabit the same soil, and in this juxta-position each maintains its distinctiveness. The fact is, C. rubrum is a very variable plant, and some peculiar form of it may be mistaken for C. botryodes by those who have not had the opportunity of seeing living specimens of the latter; and thus they have been thought not distinct. It would not be easy to decide the question from preserved specimens, as they lose much of their character in the process of drying.

One fact connected with C. botryodes will, I think, be interesting to botanists. It grows in the greatest profusion and beauty (for it is a handsome plant) where mud has been thrown out of ditches during the summer, and where grass has not had time to grow. Four or five days since, I found a considerable number of specimens in a marsh, where it had not appeared before for several years, as I have visited the spot constantly in my botanical walks. This place is two miles distant from where I usually find the plant, and two rivers intervene. I can only account for its sudden appearance, by supposing that the seeds lie dormant at the bottom of the ditches, preserving their vegetative power, until a favourable opportunity offers for them to grow, when cast out with the mud. The plant does not grow on the same spot on the following year after its appearance in this manner, except in small quantity, as it will not thrive among grass. I went to one station last year, to gather specimens for Dr. Wood, and found to my dismay, that the spot was buried beneath heaps of mud. In three weeks after, an abundant crop of C. botryodes was the result. Scarcely a specimen grows there this season, although thousands of seeds must have fallen on the soil, now nearly covered with grass and Atriplex patula. In proof that the seeds in these cases were in the mud, wherever the latter was scattered about the marsh, as it was in several places, there grew C. botryodes in profusion.

I should feel greatly obliged to any botanist who would furnish me with a specimen of C. ficifolium in flower and in fruit; and I should be happy to give him, in return, good specimens of C. botryodes. They might be sent by post.

GEO. FITT.

Nth. Yarmouth, Oct. 15, 1844.

ART. CCLIV.—*Varieties.*

528. *Note on the Spotted Hieracia.* Discordant opinions have been given respecting the correct specific names of our hawkweeds which bear leaves stained with black or purple, (Phytol. 741, 801,

841, 865). Too much stress has been laid on the stained character of the leaves. Smith says of H. murorum, that "the leaves are never stained with black." The same author describes the leaves of H. maculatum as "dark green above, more or less speckled with black or dark purple." Of H. sylvaticum he writes, "Herb hairy, of a pale, unspotted, grass green." The leaves of H. pulmonarium he describes as "bright green" and "clouded with faint blotches of purplish brown." No mention is made in 'English Flora,' of stains upon the leaves of H. Lawsoni. It would thus seem that Smith referred all the spotted-leaved plants which he had seen, either to his maculatum or pulmonarium; and succeeding botanists have doubtless been misled by Smith's error. Having had the opportunity of examining many plants with spotted leaves, in the Eastern Highlands, this year, I venture to offer the following conclusions, derived from these and the specimens previously in my hands. 1. H. murorum, more frequently than other reputed species, varies with spotted leaves; and in this state it has been usually labelled maculatum or pulmonarium. It is this which Mr. Gibson denominated hypochœroides (Phytol. 741), on account of the plant having been formerly mistaken for Hypochœris maculata. 2. H. Lawsoni also varies with stained leaves. I saw numerous examples of this in Aberdeenshire, the present year; and it has appeared in my garden, among the descendants of unstained wild plants, brought from Perthshire, some few years ago. The stains on this species are streaks rather than spots. 3. I have never seen a *wild* specimen of H. sylvaticum (certainly so) with these marks on the leaves; but a plant in Kew Gardens, which may be correctly assigned to this species, has its leaves much clouded with dark purple. This plant (equally with others, with dark green and unstained leaves, in my own garden) differs from the descriptions of H. sylvaticum, by having numerous radical and few stem leaves; but I suppose the difference in the number and colour of the radical leaves to arise from the garden locality. As to the stem-leaves, the wild plants of H. sylvaticum have often only one or two, besides those at the very base. 4. Among a number of young plants, brought to my garden from Canlochen Glen, on account of their spotted leaves, some apparently will prove to be H. nigrescens and others H. murorum. This is an additional circumstance (Phytol. 804) towards showing the identity of H. pulmonarium (*Smith*) and H. nigrescens (*Willd.*) At all events, the plant of Smith appears to me to have small resemblance to Lawsoni, with which Mr. Babington unites it under the name of diaphanum. 5. There is the variety pictum of H. rigidum (Bab. Man.) for another stained-leaved Hieracium; but I possess no specimen of it, nor do I clearly understand what is intended under the name of rigidum. Thus, we have varieties "maculatum" of H. murorum, Lawsoni, pulmonarium, sylvaticum, rigidum, and, probably, nigrescens — if this latter is not the same as pulmonarium. In Decandolle's Prodromus, there is only a single "maculatum" recognized by name; and that one is placed as a variety under H. murorum. — *Hewett C. Watson; Thames Ditton, October* 4, 1844.

529. *Note on the discovery of Leersia oryzoides in Sussex.* You may, if you please, insert in the next number of 'The Phytologist,' a notice of the discovery of Leersia oryzoides as a British plant. I have found it in three places in the Henfield level, growing along the edges of the marsh-ditches. I first observed it on the 24th of September last. — *W. Borrer; Henfield, October* 8, 1844.

530. *Note on Juncus diffusus?* A plant which I had supposed might be Juncus diffusus, grows plentifully within the sand-hills, on the east side of Huntston, between Lynn and Wells, Norfolk. It forms spreading patches of large size, mixing with J. maritimus. I think the same plant grows also near the river, above Lynn, but what I took for it there was much injured by cattle. Juncus effusus is noticed as British, in Babington's Manual, "on the authority of W. Sonder, of Hamburgh, who possesses Scottish specimens." It may be distinguished from J. glaucus by having solid pith; that of J. glaucus being cellular: it is also a greener plant, and has mucronate fruit. This notice may perhaps lead to further enquiry.—*James Backhouse; York*, 14*th of* 10*th Month*, 1844.

531. *Note on Cuscuta europæa, &c.* I lately noticed Statice spathulata, growing in company with S. Limonium and S. reticulata, near Wells, in the opening opposite Holkham; and Cuscuta europæa, on nettles, in the Bulwark-road, Earith, Huntingdonshire. C. europæa is of frequent occurrence in the adjacent parts of Cambridgeshire, where it is called "scald;" it may be presumed, on account of the scalded appearance which it gives to the bean-crops, to which it is often injurious. Burning the bean-chaff, and keeping the hedges free from nettles, have removed this pest to the farmer from some places where it formerly abounded.—*Id.*

532. *Note on Carex teretiuscula.* Your correspondent Mr. Luxford (Phytol. 1021) has appealed to me for further information as to the Carex found near Halnaby, and which I conceived at the time might be a small variety of C. paniculata. A further examination has

convinced me that it is C. teretiuscula; and for this I have also the authority of Dr. Boott. — *Joseph Woods; Lewes, October* 19, 1844.

533. *Note on Athyrium Filix-fœmina as a Tree-fern.* In a small bog very near Ryde, are some plants of Athyrium Filix-fœmina, which must be of very considerable age, the rhizomata being raised to the height, in several instances, of a foot and a half to two feet, thus constituting the plant, in some degree, a tree fern. The rhizomata however do not stand free as proper stems, but the old fronds, decayed and overgrown with Sphagnum, form slender conical tumuli, filled with fibres from the rhizomata, by which the plant assimilates to itself again the decayed materials of its former fronds. Many of the rhizomata are much branched, the whole length of the branches however being contained in the sphagnous mould. The rhizomata and branches, though contained in this mass of decayed vegetable matter, do not themselves decay, but may be traced throughout, some of the leading ramifications being more than a foot in length. Carex paniculata is growing in the same little bog, and the tumuli formed by the fern bear a very strong resemblance to those of this Carex, so well known when, under favourable circumstances, it attains a considerable age. — *T. Bell Salter; Ryde, October,* 1844.

534. *Note on Stipa pennata.* The long feathery awn by which the persistent palea of this grass is surmounted, is well known; but one interesting part of its structure appears to have escaped observation. Below the feathery portion, the awn is spirally twisted, and the seed has a sharp point, which is oblique exactly in the axis of the spire of the awn. By means of this contrivance, when the seed falls to the ground it becomes buried to some little depth. This structure is in accordance with the constitution of the seed, for I find those which are thus imbedded seldom fail to vegetate, while those which become dry are apt to lose their vegetative power. —*John Lawrence; St. John's, near Ryde, October,* 1844.

[In the generic description of Stipa, Smith says " *Cor.* of 2 valves, nearly equal in length; the outer elliptic-lanceolate, involute, slightly keeled, with a very long, terminal, twisting *awn*, jointed, and finally separable, at the base. * * *Seed* cylindrical, pointed, loose, closely enveloped in the hardened outer valve of the *corolla*, which is very sharp, and barbed with bristles, at the base, so as to penetrate and fix itself in the earth." And again: — "*Flowers* erect, slender, with long *awns*, bent just above the twisting part; then straight; either feathery or naked."— Eng. Flor. i. 161. Hooker also observes: — " *Cor.* cartilaginous, involute, terminated with a very long twisted awn, jointed at the base, and finally separating at the joint. * * A great ornament to our gardens in the summer, and to our rooms in the winter, for if gathered before the seed is ripe, the long feathery awns remain, and a tuft of them is almost as beautiful as the famed tail of the Bird of Paradise."—Brit. Flor. ed. 5. 38 Such of the Compositæ as have their fruit crowned with a pappus, whether stipitate or sessile, present a somewhat analogous provision for ensuring both the dispersion and the subsequent germination of the seed. The thistles offer a familiar illustration. When the seed, separated from its parent plant, and borne to a distance by its beautiful balloon, has met with a spot suitable for germination, it becomes, as it were, *screwed* into the ground; the pappus then separates from the seed by an articulation at the apex of the latter, and buoyantly floats away. If the thistle-down with which the air is filled in autumn, be examined, very few will be found with the seed attached, but the rays of the pappus will be seen to proceed from a central elastic ring. At this ring the pappus was articulated with the seed.—*Ed.*]

535. *Note on Asplenium fontanum.* "Every man has his bubbly Jock," and Asplenium fontanum appears to be mine. I might perhaps deny the existence of such a fern, and treat it merely as a name unrepresented by a reality; but I decline availing myself of this plea, and acknowledge that there are three European species of Asplenium successfully cultivated by our nurserymen under this name, and freely distributed to those inclined to purchase. I therefore admit the existence of such a fern, and merely dispute its having been found wild in Britain. My correspondence on this subject would fill several numbers of 'The Phytologist,' but I have no idea of dragging it before the public. Still, Mr. Redhead and Mr. Thompson, by calling *public* attention to supposed discoveries, seem to invite a *public* reply. Of all the recorded British habitats of Asplenium fontanum, Mr. Redhead's appears to me decidedly the best and most worthy of reception (Phytol. 1084). In the first place, the specimens are actually in existence; are decidedly referrible to Asplenium Halleri, one of the species cultivated under the name of fontanum; and finally, they came into my hands directly from the discoverer; who unequivocally declares that at a certain date, and at a certain place, he gathered them with his own hand. This, one would suppose sufficient for the most sceptical; but I will venture to ask Mr. Redhead a few questions, which, if he will kindly and satisfactorily answer, I will instantly apologize for having expressed the slightest doubt on the subject. 1. Will Mr. Redhead inform the readers of 'The Phytologist,' whether he was more than eight years of age when he discovered Asplenium fontanum in Wharncliffe wood, in the year 1838; and if older than I suppose, will he please to say how much older? 2. Will Mr. Redhead inform the readers of 'The Phytologist,' whether he had any knowledge whatever of Botany at the period of this discovery; that is, whether he believes that in 1838, he would have known a fern from a thistle? 3. Will Mr. Redhead inform the readers of 'The Phyto-

logist,' whether he labelled the specimens found by him in 1838, with date, locality, &c., at the time of finding them; and if not, by what means he traces the specimens sent to London to the date and locality mentioned? If Mr. Redhead succeeds in demonstrating to the readers of 'The Phytologist,' that in 1838 he had arrived at years of discretion and judgment; that he possessed a tolerable acquaintance with British plants; that he was then in the habit of collecting and labelling plants; that he recognized this fern as a rarity, or exhibited it to any botanist who told him its name and value; then I shall be inclined to enter into the subject more at length. But if it turns out as I suspect, that Mr. Redhead was a mere child, neither possessing nor pretending to possess the slightest knowledge of Botany, neither labelling nor even collecting plants;— why then I think the question may be considered as decided. In reply to Mr. Thompson's communication (Phytol. 1081), it may be well to state that Mr. Shepherd's supposed discovery was thoroughly sifted prior to the publication of my British Ferns, and this, not only by myself, but by a botanist whose judgment is received with universal respect; and he fully united with me in considering the evidence unsatisfactory. I may add, that during the past week, a dealer in British ferns called at the printing-office, and in the presence of a valued contributor to 'The Phytologist' (G. S. Gibson), stated that he knew of *three* British localities for Asplenium fontanum. He sells these rarities daily at the eastern entrance of the Bank of England; or, if the metropolitan market appear to be glutted for a season, he tours the provinces, supplying country botanists on very liberal terms. His stock is inexhaustible. *Edward Newman; 2, Hanover St., Peckham, October* 24, 1844.

535. *Rarer Plants observed in the neighbourhood of Penzance*

Agrostis setacea. Newlyn cliffs.
Ammophila arenaria. Hayle sands.
Antirrhinum Orontium. Bologas.
Brassica oleracea. Penzance cliffs.
Briza minor. Bologas.
Callitriche pedunculata, β. sessilis. Chyanhall moor.
Cerastium tetrandrum. Marazion green.
Cicendia filiformis. Chyanhall moor.
Cochlearia danica. Newlyn cliff, and on walls in Penzance.
Cynodon Dactylon. Marazion green.
Daucus maritimus. Land's end.
Erica vagans. Conner down.
Erythræa ramosissima. Conner down.
Euphorbia Paralias. Hayle sands.
——— *portlandica.* Hayle cliffs.
Gastridium lendigerum. Conner down.
Helleborus viridis. Zimmermum cot.
Hyoscyamus niger. Marazion green.
Illecebrum verticillatum. Chyanhall moo
Inula Helenium. Trereife.
Iris fœtidissima. Hayle.
— *tuberosa.* Olverton and Treveneth, o hedges.
Juncus maritimus. Hayle river.
Lavatera arborea. Mousehole cliffs.
Lepturus incurvatus. Hayle causeway.
Littorella lacustris. Chyanhall moor.
Mentha viridis. Newlyn cliffs.

Myriophyllum alterniflorum. Chyanhall moor.
Narthecium ossifragum. Chyanhall moor.
Nepeta Cataria. Logan rock.
Oxalis stricta. Larrigan, near Penzance.
—— *corniculata.* Bologas, rare.
Pinguicula lusitanica. Chyanhall moor.
Polycarpon tetraphyllum. Newlyn.
Polygonum Rayii. Newlyn green and Marazion green.
Radiola Millegrana. Newlyn cliff.
Ranunculus parviflorus. Mousehole.
Reseda fruticulosa. Marazion green.
Rumex Hydrolapathum. Marazion marsh
——— *sanguineus.* Penzance.
Samolus Valerandi. Mousehole cliff.
Schœnus nigricans. Marazion marsh.
Scilla verna. Penlee point.
Scrophularia Scorodonia. Newlyn cliff.
Sedum Telephium. Logan rock.
Scutellaria minor. Bologas.
Sibthorpia europæa. Newlyn cliff.
Spergula subulata. Chyanhall moor.
Stachys ambigua. Newlyn cliff.
Tamarix anglica. St Michael's mount.
Teesdalia nudicaulis. Bologas.
Teucrium Chamædrys. Ludgvan.
Trifolium ornithopodioides. Marazion gr.
Zostera marina. Penzance.
Adiantum Capillus-Veneris. Hayle, in caves and high cliffs.
Hymenophyllum Wilsoni. Carn Brea.
Lastræa recurva. Chyune grove.
Equisetum arvense : a variety with mixed fronds, approaching E. palustre.— This singular form I have gathered in several states, some of them having the normal fertile stem attached, proving it to be the true plant.
Pilularia globulifera. Chyanhall moor.
Phascum axillare. Newlyn.
——— *rectum.* Ludgvan, J. Ralfs, Esq.
Gymnostomum pyriforme. Bologas.
Schistostega pennata. Newlyn.
Diphyscium foliosum. Chyanhall.
Bryum Tozeri. Newlyn cliff, in fruit.
Leucodon sciuroides. Miney.
Hookeria lætevirens. Mousehole cave, W. Borrer, Esq.
Parmelia Borreri. Treveneth, beautifully in fruit.
Roccella fuciformis. Logan rock.
Psora atro-rufa. Penlee point, J. Ralfs, Esq.

Wm. Curnow ; Pembroke Cottage, Newlyn Cliffs, Penzance, 1844.

Art. CCLV.—*Proceedings of Societies.*

BOTANICAL SOCIETY OF LONDON.

October 4, 1844. — John Reynolds, Esq., Treasurer, in the chair. Read, a General Description of the Botany, Climate and Physical Geography of the Neighbourhood of Embleton, in Northumberland; drawn up by Robert Embleton, Esq., in illustration of a local herbarium of the district, collected for the Society by the same gentleman. The description and herbarium will remain at the Society's Rooms as a valuable record of the present condition of the district. — *G. E. D.*

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